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Amendment and Response

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Serial No.: 10/626,261

Confirmation No.: 9585

Filed: 24 July 2003

For: HARDENABLE THERMALLY RESPONSIVE COMPOSITIONS

Amendments to the Specification

Please replace the paragraph beginning at page 10, line 10, with the following amended paragraph.

Chemically Polymerizable Compositions. Chemically polymerizable compositions may include glass ionomer cements such as conventional glass ionomer cements that typically employ as their main ingredients a homopolymer or copolymer of an ethylenically unsaturated carboxylic acid (e.g., poly acrylic acid, copoly (acrylic, itaconic acid), and the like), a fluoroaluminosilicate ("FAS") glass, water, and a chelating agent such as tartaric acid. Conventional glass ionomers (i.e., glass ionomer cements) typically are supplied in powder/liquid formulations that are mixed just before use. The mixture will undergo self-hardening in the dark due to an ionic reaction between the acidic repeating units of the polycarboxylic acid and cations leached from the glass. The glass ionomer cements may also include resin-modified glass ionomer ("RMGI") cements. Exemplary chemically polymerizable compositions are described, for example, in Applicants' Assignees' copending Application Serial No. 10/327,411, filed December 20, 2002 (published as US 2004-0120901).

Please insert the following new paragraph at page 10, immediately after line 23:

The glass ionomer cements may also include resin-modified glass ionomer ("RMGI") cements. Like a conventional glass ionomer, an RMGI cement employs an FAS glass. However, the organic portion of an RMGI is different. In one type of RMGI, the polycarboxylic acid is modified to replace or end-cap some of the acidic repeating units with pendent curable groups and a photoinitiator is added to provide a second cure mechanism, e.g., as described in U.S. Pat. No. 5,130,347 (Mitra). The term "photocurable ionomer", as used herein, refers to a polymer having sufficient pendent ionic groups to undergo a setting reaction in the presence of a reactive powder and water, and sufficient pendent polymerizable groups to enable the resulting mixture to be polymerized, i.e., cured, upon exposure to radiant energy.

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Please replace the paragraph beginning at page 13, line 7, with the following amended paragraph.

Thermally responsive viscosity modifiers include, for example, poly(oxyalkylene) polymers, particularly the polymeric surfactants available under the trade designation PLURONIC from BASF Wyandotte (Wyandotte, MI). Other poly(oxyalkylene) polymers may also be useful as a thermally responsive viscosity modifiers. Preferably at least 50%, and more preferably at least 70%, of the oxyalkylene units in the polymer are oxyethylene units. Another class of suitable thermally responsive viscosity modifiers is poly(N-alkyl(meth)acrylamide) polymers including, for example, poly(N-isopropylacrylamide) prepared from the free radical polymerization of N-isopropylacrylamide as disclosed, for example, in Applicants' Assignees' copending Application Serial No. 10/626,341 (published as US 2004-0162375).